Section I. (Amendments to the Claims)

Please amend claims 1, 6, 7, 11-14 and 25, as set out below in the listing of claims 1-28 of the application.

1. **(Currently amended)** A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space above said wells within the thermally conductive block for accumulation of vapor, wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block, the thermally conductive block having an interior volume that comprises (i) said interior space and (ii) an internal volume of said multiplicity of elongated wells, wherein the internal volume of said multiplicity of said wells is from about 1/3 to about 1/2 of the interior volume;

a heating device for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on and dimensionally coextensive with the top of the thermally conductive block, being in abutment with edges of the thermally conductive block and securable thereto for leak-tightly sealing the thermally conductive block to form a closed vessel, and removable for ease of filling the elongated wells; and

~~an openable and closable~~ a valved outlet passage ~~for discharge of vapor formed in the vaporizer~~ communicatively connected to the removable sealing lid and in vapor flow communication with the interior space, for discharge of vapor formed in the vaporizer.

2. **(Previously presented)** The vaporizer of claim 1 further comprising a control mechanism for controlling temperature generated by the heating device.

3. **(Original)** The vaporizer of claim 1 containing liquid source material.

4. **(Original)** The vaporizer of claim 1 containing solid source material.

5. **(Previously presented)** A vaporizer comprising:

a thermally conductive block comprising a top surface and bottom surface and a multiplicity of non-moving elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, wherein each elongated well consists of a closed end and single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block;

a heating device for applying heat to the multiplicity of the elongated wells within the thermally conductive block;

a removable sealing lid positioned on the top of the thermally conductive block for sealing the thermally conductive block to form a closed vessel and removable for ease of filling the elongated wells; and

an openable and closable outlet for discharge of vapor formed in the vaporizer communicatively connected to the removable sealing lid and the interior space, wherein the vaporizer contains decaborane.

6. **(Currently amended)** The vaporizer of claim [[1]] 5 wherein at least four elongated wells are formed in the thermally conductive block, and each of said wells has a diameter in a range of from about 3 to 8 millimeters.

7. **(Currently amended)** The vaporizer of claim [[1]] 5 wherein the heating device for applying heat to the thermally conductive block comprise at least one resistive heating element.

8. **(Original)** The vaporizer of claim 1 wherein each wall of the thermally conductive block has at least one resistive heating element attached thereto.

9. **(Previously presented)** The vaporizer of claim 2 wherein the control mechanism for controlling temperature comprise a thermocouple.

10. **(Previously presented)** The vaporizer of claim 2 wherein the control mechanism for controlling temperature is arranged to maintain the block at a sufficient temperature to vaporize the source material.

11. **(Currently amended)** The vaporizer of claim [[1]] 5 wherein the thermally conductive block is fabricated of aluminum or an aluminum alloy.

12. **(Currently amended)** The vaporizer of claim [[6]] 1 wherein the ~~thermally conductive block has an interior volume of about 160 cm^3~~ valved outlet passage comprises a conduit secured to a central portion of said sealing lid, as a single piece structure.

13. **(Currently amended)** The vaporizer of claim [[12]] 1 wherein the ~~multiplicity of elongated wells constitute an interior volume of about 60 cm^3~~ wherein the sealing lid is arranged to allow flow of vapor from the interior space out of the vaporizer only through said valved outlet passage.

14. **(Currently amended)** The vaporizer of claim 1 wherein the ~~thermally conductive block is uniformly heated, thereby reducing cold spots within the elongated wells and interior space~~ sealing lid is secured to the thermally conductive block by mechanical fasteners, and the heating device includes resistors attached to the thermally conductive block, a thermocouple attached to the thermally conductive block, and a temperature controller and power supply operatively arranged so that the temperature controller is actuated in response to temperature sensed by the thermocouple, to energize the resistors for heating of the thermally conductive block.

15. **(Withdrawn)** A method for vaporizing a source material comprising the steps of:
introducing a source material into a multiplicity of elongated wells formed in a thermally conductive block, the multiplicity of elongated wells communicatively connected to an

interior space within the thermally conductive block for accumulation of vaporized source material, and wherein each elongated well consists of a closed end and a single opening that is in fluid communication with the interior space, and wherein each elongated well is vertically positioned relative to the top and bottom surface of the conductive block, the thermally conductive block having an interior volume that comprises (i) said interior space and (ii) an internal volume of said multiplicity of elongated wells, wherein the internal volume of said multiplicity of said wells is from about 1/3 to about 1/2 of the interior volume;

placing a sealing lid on the conductive block and sealing the thermally conductive block to form a closed vessel and a vacuum in the multiplicity of wells and interior space;

applying heat to the thermally conductive block to heat the elongated wells and vaporize source material therein to form source material vapor that accumulates in the interior space; and

opening an outlet valve communicatively connected to the sealing lid and in fluid communication with the interior space for discharge of vapor for delivering source material vapor to a deposition system.

16. **(Withdrawn)** The method of claim **15** wherein the deposition system comprises a process unit selected from the group consisting of ion implantation units, chemical vapor deposition units, and metal organic chemical vapor deposition units.

17. **(Withdrawn)** The method of claim **15** further comprising controlling temperature generated by the step of applying heat.

18. **(Withdrawn)** The method of claim **15** wherein the source material is a liquid or a solid.

19. **(Withdrawn)** The method of claim **15** wherein the source material comprises decaborane.

20. **(Withdrawn)** The method of claim **15** wherein at least four elongated wells are formed within the thermally conductive block.

21. **(Withdrawn)** The method of claim 15 wherein the step of applying heat comprises resistively heating the thermally conductive block.

22. **(Withdrawn)** The method of claim 15 wherein temperature within the thermally conductive block is maintained at a sufficient temperature to vaporize the source material.

23. **(Withdrawn)** The method of claim 15 wherein the thermally conductive block is fabricated of aluminum or aluminum alloy.

24. **(Withdrawn)** The method of claim 15 wherein the thermally conductive block is uniformly heated, thereby reducing cold spots within the elongated wells and interior space.

25. **(Currently amended)** A vaporizing and deposition system comprising

a vaporizer comprising: a thermally conductive block having a multiplicity of stationary elongated wells formed therein for placement of a vapor source material, the multiplicity of elongated wells communicatively connected to an interior space within the thermally conductive block for accumulation of vapor, and wherein each elongated well consists of a closed end and a single opening in fluid communication with the interior space, the thermally conductive block having an interior volume that comprises (i) said interior space and (ii) an internal volume of said multiplicity of elongated wells, wherein the interior volume is in a range of from about 120 cm^3 to about 200 cm^3, wherein each of the elongated wells in said multiplicity of elongated wells has an internal diameter of from about 3 to about 8 mm, and wherein the internal volume of said multiplicity of said wells is from about 1/3 to about 1/2 of the interior volume;

a heating device for applying heat to the thermally conductive block to vaporize the source material;

a removable sealing lid positioned on and dimensionally coextensive with the top of the thermally conductive block, being in abutment with edges of the thermally conductive block and securable thereto for leak-tightly sealing the thermally conductive block to form a closed vessel, and removable for ease of filling the elongated wells; and

an actuatable outlet positioned in the removable sealing lid for opening and allowing discharge of vapor formed in the vaporizer in fluid communication with the interior space.

26. **(Original)** The system of claim 25 wherein the source material directly contacts interior surfaces of elongated wells.

27. **(Previously presented)** The vaporizer of claim 1, wherein the thermally conductive block is fabricated of a suitable heat-conducting material.

28. **(Previously presented)** The vaporizer of claim 27, wherein the heat conducting material is selected from the group consisting of silver, silver alloys, copper, copper alloys, aluminum, aluminum alloys, lead, nickel clad, stainless steel, graphite and ceramic material.